

## WHAT IS CLAIMED IS:

1           1.    For use in a base station of a wireless network capable  
2 of communicating with mobile stations located in a coverage area of  
3 said wireless network, an apparatus for assigning a vocoder  
4 associated with said base station to process call traffic  
5 associated with a first mobile station, said apparatus comprising:

6               a connection network capable of connecting a plurality of  
7 vocoders to a plurality of channel elements, each of said plurality  
8 of channel elements capable of processing forward channel messages  
9 transmitted to said first mobile station and reverse channel  
10 messages received from said first mobile station; and

11              a controller capable of receiving an overhead message  
12 transmitted by said first mobile station and extracting from said  
13 overhead message a data value suitable for indicating if said first  
14 mobile station is capable of transmitting and receiving TTY/TDD  
15 Baudot code traffic, wherein said controller causes said connection  
16 network to connect a first channel element processing forward and  
17 reverse channel messages associated with said first mobile station  
18 to a first selected vocoder capable of processing TTY/TDD Baudot  
19 code traffic if said data value indicates said first mobile station  
20 is capable of transmitting and receiving TTY/TDD Baudot code  
21 traffic.

1           2.    The apparatus as set forth in Claim 1 wherein said data  
2 value comprises unique electronic serial number (ESN) data  
3 associated with said first mobile station.

1           3.    The apparatus as set forth in Claim 1 wherein said data  
2 value comprises at least one predetermined data bit of the overhead  
3 message.

1           4.    The apparatus as set forth in Claim 1 wherein said data  
2 value comprises a plurality of bits of the overhead message.

1           5.    The apparatus as set forth in Claim 1 wherein said  
2 overhead message is an origination message transmitted from said  
3 first mobile station to said base station.

1           6.    The apparatus as set forth in Claim 1 wherein the  
2 plurality of vocoders includes a plurality of non-TTY/TDD Baudot  
3 code-capable vocoders such that the plurality of non-TTY/TDD Baudot  
4 code-capable vocoders outnumbers the TTY/TDD Baudot code-capable  
5 vocoders.

1           7.    The apparatus as set forth in Claim 1 wherein said data  
2 value comprises unique International Mobile Station Identifier  
3 (IMSI) data associated with said first mobile station.

1           8.    The apparatus as set forth in Claim 1 wherein said  
2 controller causes said connection network to connect a second  
3 channel element processing forward and reverse channel messages  
4 associated with said first mobile station to a second selected  
5 vocoder that is incapable of processing TTY/TDD Baudot code traffic  
6 if said data value does not indicate that said first mobile station  
7 is capable of transmitting and receiving TTY/TDD Baudot code  
8 traffic.

1           9.    A wireless network comprising:

2                a plurality of base transceiver stations capable of  
3 communicating with mobile stations located in a coverage area of  
4 said wireless network, wherein a first one of said plurality of  
5 base transceiver stations comprises an apparatus for assigning a  
6 vocoder associated with said base station to process call traffic  
7 associated with a first mobile station, wherein said apparatus  
8 comprises:

9                a connection network capable of connecting a  
10 plurality of vocoders to a plurality of channel elements, each  
11 of said plurality of channel elements capable of processing  
12 forward channel messages transmitted to said first mobile  
13 station and reverse channel messages received from said first  
14 mobile station; and

15               a controller capable of receiving a control message  
16 transmitted by said first mobile station and extracting from  
17 said control message a data value suitable for indicating if  
18 said first mobile station is capable of transmitting and  
19 receiving TTY/TDD Baudot code data traffic, wherein said  
20 controller causes said connection network to connect a first  
21 channel element processing forward and reverse channel  
22 messages associated with said first mobile station to a first



1           14. The wireless network as set forth in Claim 9 wherein the  
2 plurality of vocoders includes a plurality of non-TTY/TDD Baudot  
3 code-capable vocoders such that the plurality of non-TTY/TDD Baudot  
4 code-capable vocoders outnumber the TTY/TDD Baudot code-capable  
5 vocoders.

1           15. The wireless network as set forth in Claim 9 wherein said  
2 data value comprises unique International Mobile Station Identifier  
3 (IMSI) data associated with said first mobile station.

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16. The wireless network as set forth in Claim 9 wherein said  
controller causes said connection network to connect a second  
channel element processing forward and reverse channel messages  
associated with said first mobile station to a second selected  
vocoder that is incapable of processing TTY/TDD Baudot code traffic  
if said data value does not indicate that said first mobile station  
is capable of transmitting and receiving TTY/TDD Baudot code  
traffic.

1           17. For use in a base station of a wireless network that is  
2 capable of communicating with mobile stations located in a coverage  
3 area of the wireless network, a method of assigning a vocoder  
4 associated with the base station to process call traffic associated  
5 with a first mobile station, the method comprising the steps of:

6           receiving a control message transmitted by the first  
7 mobile station;

8           extracting from the control message a data value suitable  
9 for indicating if the first mobile station is capable of  
10 transmitting and receiving TTY/TDD Baudot code data traffic; and

11           if the data value indicates that the first mobile station  
12 is capable of transmitting and receiving TTY/TDD Baudot code data  
13 traffic, connecting a first channel element processing forward and  
14 reverse channel messages associated with the first mobile station  
15 to a first selected vocoder capable of processing TTY/TDD Baudot  
16 code traffic.

1           18. The method as set forth in Claim 17 wherein the data  
2 value comprises unique electronic serial number (ESN) data  
3 associated with the first mobile station.

1        19. The method as set forth in Claim 17 wherein the data  
2 value comprises at least one predetermined data bit in an overhead  
3 control message.

1        20. The method as set forth in Claim 17 wherein the data  
2 value comprises unique International Mobile Station Identifier  
3 (IMSI) data associated with said first mobile station.

1        21. The method as set forth in Claim 17 and further including  
2 the step of:  
3            if the data value does not indicate that the first mobile  
4 station is capable of transmitting and receiving TTY/TDD Baudot  
5 code data traffic, connecting a second channel element processing  
6 forward and reverse channel messages associated with the first  
7 mobile station to a second selected vocoder that is incapable of  
8 processing TTY/TDD Baudot code traffic.



22. For use in a mobile station that operates in a wireless network that communicates with a plurality of mobile stations located in a coverage area of the wireless network, a method of assigning a vocoder associated with a base station to process call traffic associated with the mobile station, the method comprising the steps of:

the mobile station transmitting a control message comprising a data value that is suitable for indicating whether the mobile station is capable of transmitting and receiving TTY/TDD Baudot code traffic; and

if the data value indicates that the mobile station is capable of transmitting and receiving TTY/TDD Baudot code data traffic, the mobile station communicating with the base station through a first channel element that processes forward and reverse channel messages associated with the first mobile station, the first channel element being coupled to a first selected vocoder that is capable of processing TTY/TDD Baudot code traffic.